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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,552	10/09/2001	Ramon R. Reglos	X-887 US	7190
24309	7590	03/15/2005	EXAMINER	
XILINX, INC ATTN: LEGAL DEPARTMENT 2100 LOGIC DR SAN JOSE, CA 95124			STEVENSON, ANDRE C	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,552

Applicant(s)

REGLOS ET AL.

Examiner

Andre' C. Stevenson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s).

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detail Action

Election/Restrictions

Applicant's election of Group I, claims 1-7, in the reply filed on January 13, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 8-10 have been withdrawn and subsequently canceled by applicant in the response to restriction, filed on January 13, 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnworth et al. (U.S. Pat. No. 6,219,908 B1, Patented 4/24/01, Filed 11/20/97), in view of Eldridge (U.S. Pat. No. 6,764,869 B2, Patented 7/20/04, Filed 9/12/01).

Farnworth substantially shows, with respect to drawings 1-9 and corresponding text listed below, with respect to **claim #1**, a method of sorting dice, including by speed (**column 6, line 14-18**) comprising; identifying good and bad dice (**column 6, line 5-13**), while the die are part of the wafer (**column 6, line 2-13**), making a wafer map of speed grades of the good dice; dicing

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the wafer (**column 6, lines 2-30**), and completing the process of packaging (**column 6, lines 64-67; column 7, lines 1-5**). Farnworth also shows, **pertaining to claim #4**, the method, comprising the further step of: marking each of the packages with a mark indicating the first speed grade (**column 14, lines 31-36; column 5, lines 8-20**). Farnworth shows, with respect to **claim #5**, a method wherein the steps of attaching dice are performed by a programmed die attach machine that uses the speed grades in the wafer map (**column 6, lines 31-39**).

Farnworth fails to show, **pertaining to claim #1**, a method for filling an order for a first package type and the first speed grade by attaching dice of the first speed grade to packages of the first package type; and placing dice of the second speed grade into another location.

Pertaining to Claim #2, Farnworth also fails to show, the method wherein the step of placing dice of the second speed grade into another location comprises: filling an order for a second package type and the second speed grade by attaching dice of the second speed grade to packages of the second package type (**column 6, lines 2-22**). **Pertaining to claim #3**, Farnworth fails to show the method wherein the step of placing dice of the second speed grade into another location comprises: placing dice of the second speed grade into a carrier for storage until the second speed grade is ordered (**column 6, lines 31-40**). **Pertaining to Claim #6**, Farnworth also fails to show, wherein the die attach machine further transfers some of the dice to a storage location unpackaged. **Pertaining to claim #7**, Farnworth fails to show, wherein the die attach machine fills part of an order by attaching dice that have been stored in a storage location to packages of the first package type.

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Eldridge teaches, in a similar process, wherein the die are processed with respect to their speed grades, **with respect to claim #1**, a method of sorting dice, by speed, comprising: identifying good and bad dice while the dice are part of a wafer, (**column 1, line 49-53; column 4, line 32-36**), for a wafer having first and second speed grades different from each other: filling an order for a first package type and the first speed grade by attaching dice of the first speed grade to packages of the first package type; and placing dice of the second speed grade into another location (**column 4, line 22-41**). **Pertaining to claim #2**, Eldridge teaches, the method wherein the step of placing dice of the second speed grade into another location comprises: filling an order for a second package type and the second speed grade by attaching dice of the second speed grade to packages of the second package type (**column 3, lines 33-45; column 4, lines 23-41**). **Pertaining to claim #3**, Eldridge teaches the method wherein the step of placing dice of the second speed grade into another location comprises: placing dice of the second speed grade into a carrier for storage until the second speed grade is ordered (**column 3, lines 33-45; column 4, lines 23-41**). Eldridge also teaches, **pertaining to Claim #6**, wherein the die attach machine further transfers some of the dice to a storage location unpackaged (**column 3, line 48-57**). Eldridge also teaches, **pertaining to Claim #7**, the method wherein the die attach machine fills part of an order by attaching dice that have been stored in a storage location to packages of the first package type (**column 18, line 27-33**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, with respect to **claim #1**, to include a method of sorting dice, by speed, comprising: identifying good and bad dice while the dice are part of a wafer, for a wafer having

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first and second speed grades different from each other: filling an order for a first package type and the first speed grade by attaching dice of the first speed grade to packages of the first package type; and placing dice of the second speed grade into another location, into the method of Farnworth, as taught by Eldridge, with the motivation that the inclusion would improve the method of assembling and testing of electronics modules.

It would have been obvious to one having ordinary skill in the art at the time the invention was made, with respect to **claim #2**, to include the step of placing dice of the second speed grade into another location comprises: filling an order for a second package type and the second speed grade by attaching dice of the second speed grade to packages of the second package type, into the method of Farnworth, as taught by Eldridge, with the motivation that the separation of the dice by speed would organize and speed the distribution of die to the need components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made, with respect to **claim #3**, to include the step of placing dice of the second speed grade into another location comprises: placing dice of the second speed grade into a carrier for storage until the second speed grade is ordered, into the method of Farnworth, as taught by Eldridge, with the motivation that the separation of the dice by speed would organize and speed the distribution of die to the need components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made, with respect to **claim #7**, to include the method wherein the die attach machine fills part of an order by attaching dice that have been stored in a storage location to

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packages of the first package type, into the method of Farnworth, as taught by Eldridge, with the motivation that by filling an order, the attachment device is furthering the process of building a module, which is the purpose of the method of Farnworth and Eldridge.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; Hembree et al. (U.S. Pat. No. 6,427,239), Eldridge et al. (U.S. Pat. No. 5,998,228), Beffa (U.S. Pat. No. 5,927,512).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre' Stevenson whose telephone number is (571) 272 1683. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Lebentritt, can be reached on (571) 272 1873. The fax phone number for the organization where this application or proceeding is assigned is (703) 308 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956. Also, the proceeding numbers can be used to fax information through the Right Fax system;

(703) 872-9306

Andre' Stevenson

03/01/05


MICHAEL LEBENTRITT
SUPERVISORY PATENT EXAMINER